Optimization of synthetic natural gas (SNG) purification methods for national gas grid integration

이동헌[1,2,*], 김종진[1], 연승현[1], 박선원[2]
[1]현대건설; [2]한국과학기술원
(donghun.lee@hdec.co.kr*)

The optimal purification method of synthetic natural gas (SNG) for pipeline integration has been studied in this work. Natural gas(NG) is clean and reliable energy carrier than coal and oil, so that NG price is expected to rise continuously. SNG production from coal is attractive alternative to reduce greenhouse gas and replace conventional fossil fuels in high price of NG.

The major advantage of SNG production is a potential to integrate the existing national gas pipeline infrastructure. Therefore, SNG business should consider the integration into the grid under standard for pipeline-quality.

Under 10,400 kcal/Nm^3 of standard heating value condition in Korea, gas separation and gas blending options should be considered to improve the heating value of raw SNG produced. In this work, we propose an optimal purification method in consideration of economic aspect.